

CLAIMS

1. A heat-resisting steel comprising 0.15 - 0.30 wt.% C, 0.05 - 0.3 wt.% Si, 0.01 - 0.7 wt.% Mn, 1.8 - 2.5 wt.% Cr, 0.15 - 0.23 wt.% V, 1.5 - 2.5 wt.% W, 0.01 - 0.02 wt.% Ti, 0.01 - 0.08 wt.% Nb, 0.005 - 0.03 wt.% N, 0.001 - 0.015 wt.% B, and Fe and unavoidable impurities as the remainder.

2. A heat-resisting steel comprising 0.15 - 0.30 wt.% C, 0.05 - 0.3 wt.% Si, 0.01 - 0.7 wt.% Mn, 1.8 - 2.5 wt.% Cr, 0.15 - 0.23 wt.% V, 1.5 - 2.5 wt.% W, 0.3 - 0.8 wt.% Mo, 0.01 - 0.02 wt.% Ti, 0.01 - 0.08 wt.% Nb, 0.005 - 0.03 wt.% N, 0.001 - 0.015 wt.% B, and Fe and unavoidable impurities as the remainder.

3. The heat-resisting steel according to claim 1 or 2, wherein all of Nb and a part of Fe are replaced with V and/or Ti to make the V content 0.23 (exclusive) - 0.35 wt.%, and the Ti content 0.02 (exclusive) - 0.03 wt.%, the heat-resisting steel thus containing no Nb other than that existing as the impurity.

4. The heat-resisting steel according to claim 1 or 2, wherein all of Nb and Ti, and a part of Fe are replaced with V to make the V content 0.23 (exclusive) - 0.35 wt.%, the heat-resisting steel thus containing no Nb and Ti other than those existing as the impurities.

5. The heat-resisting steel according to claim 3 or 4, wherein a part of Fe is replaced with Ni to make the Ni content 0.1 - 3.0 wt.%.

6. The heat-resisting steel according to claim 3 or 4, wherein a part of Fe is replaced with Cu to make the Cu content 0.1 - 3.0 wt.%.

7. A heat-resisting steel that is obtained by subjecting a heat-resisting steel according to any of claims 1 to 6 to a heat treatment comprising the steps of normalizing the heat-resisting steel, and oil-cooling the normalized heat-resisting steel to a temperature of 300°C or lower.

8. The heat-resisting steel according to any of claims 1 to 7, useful for producing steam turbine rotors.

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